## REMARKS

Claims 1-12, 14, 16-24, 26, and 28 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent Publication No. 2002/00304170 (Tiedemann). Claims 13, 15, 25, and 27 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Tiedemann.

The present subject matter involves a communication network performing an iterative computation of power levels and channelization codes <u>each time</u> a transmission is to be made. The Office Action cites a prior art technique in which power levels evolve over the course of many transmissions. In the mot recent Office Action, the Examiner appears to have taken the position that these are equivalent approaches. Such a position is in error for at least the following two reasons:

(1) The power allocations according to the present subject matter are recomputed via an iterative technique for each new transmission, whereas the cited reference merely teaches that certain power allocations evolve over time. Even if this is taken to imply that the reference teaches recomputation, the individual recomputations are not necessarily "iterative" in nature.

(2) The "iterations" according to the present subject matter clearly involve computing intermediate values which are virtual and to be used only as a basis for further iterations. Such intermediate values are therefore different in substance from the actual power levels that are dynamically adjusted as taught by the reference. Therefore, correction of a power level as taught by the reference cannot be equated with iterative recomputation of an intermediate value as described in the present application and the claimed subject matter.

Moreover, as will be explained below, the cited reference does not teach that the dynamic adjustment of power levels should be computed using an iterative technique. Therefore, even if

an iterative technique of some kind could be used for that purpose, it is not inherent in the teachings of the cited reference.

In accordance with the iterative technique set forth in the claimed subject matter, the number of assigned channelization codes and the power fractions are adjusted over a plurality of iterations to arrive at a solution that optimizes the channel capacity. In particular, the claimed subject matter includes, among other things, evaluating a number representing how many channelization codes are to be assigned to each of the packets and evaluating the portion of the allocated transmission power to be assigned to each data packet using an iterative procedure that adjusts the values for the portions of the allocated transmission power and the number of channelization codes for at least one iteration responsive to the channel quality metrics and the values for the portions of the allocated transmission power and the number of channelization codes determined during at least one prior iteration to optimize a capacity of a channel for communicating the data packets during the current transmission.

The Office Action maintains that Tiedemann teaches these features. The Office Action cites the dynamic adjustment of the power level for the ABR traffic stream as meeting the features of the iterative technique. The passages cited by the Office Action relate to varying the power levels of the bit stream over time. In contradistinction thereto, the claimed subject matter includes iteratively adjusting the values for the portions of the allocated transmission power and the number of channelization codes for a current transmission. The time-varying changes in the power levels cited in Tiedemann are irrelevant to how assignments are made for a current transmission. The intermediate power level assignments used in the iterative technique are not visible in the output stream, as the intermediate assignments are not used for transmission. Only the final assignments that result from the iterative technique are used for the current

transmission. The iterative technique is applied to determine assignments for a current transmission prior to the transmission.

The Office Action seems to suggest that changing the power level over multiple transmissions equates to iteratively adjusting the values for the portions of the allocated transmission power and the number of channelization codes <u>for a current transmission</u>, as set forth in the claimed subject matter. The claim language of "a current transmission" clearly represents a single, discrete transmission that is distinguishable from a bit stream that relates to a plurality of transmissions over time.

Clearly, the varying of transmission power levels over time provides no insight as to how power levels are assigned to a particular transmission. Applicants are unsure how the Examiner arrives at the conclusion that Tiedemann teaches the features of the claimed subject matter. The passages cited only relate to power levels over time, which necessarily relate to multiple transmissions (*i.e.*, a transmission stream). Tiedemann does not indicate how power levels are assigned <u>for a current transmission</u>. The Office Action merely makes the unfounded conclusion that "Therefore, Tiedemann discloses all limitations as presented in amended claims 1, 10, 16, and 28 …" The Office Action provides no specific mapping as to how each feature is met, because the cited passages relate only to power levels over time, not to the assignment of parameters for a current transmission.

It does not <u>necessarily</u> flow that Tiedemann use the iterative technique set forth in the claimed subject matter. Tiedemann explicitly states that different techniques may be used, so the position that Tiedemann inherently contemplates the claimed subject matter <u>as a matter of necessity</u> cannot be supported. Tiedemann provides no equations or optimization guidelines that teach how a capacity of the channel may be optimized. Moreover, the technique of the claimed

subject matter is not obvious in view of Tiedemann in light of the lack of teaching for power and channelization codes. Tiedemann simply does not employ a technique for assigning power fractions and channelization codes that is repeated over a plurality of iterations to optimize channel capacity for a current transmission. To establish a *prima facie* case of obviousness, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974).

For these reasons, claims 1, 10, 16, 28, and all claims depending therefrom are allowable. Applicants respectfully request the rejections of these claims be withdrawn.

With respect to the dependent claims, the specific features set forth for the iterative technique and the use of optimization parameters, constraints, and cost functions are neither taught nor suggested by Tiedemann. Again, the cited passages only relate to the power levels over time, not to the assignments for a current transmission. The Office Action fails to demonstrate by specific reference to the prior art how the use of optimization parameters, constraints, and/or a cost function may be used in an iterative technique to optimize channel capacity for a current transmission. The general rejections provided do not address with specificity each and every limitation of the claimed subject matter.

In view of the foregoing, Applicants respectfully submit that all pending claims are in condition for allowance. The Examiner is invited to contact the undersigned at (713) 934-4070 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,

Date:  January 7, 2008                                    /Scott F. Diring/

Scott F. Diring
Reg. No. 35,119
Williams Morgan & Amerson, P.C.
10333 Richmond Avenue, Suite 1100
Houston, TX 77042
(713) 934-4070
(713) 934-7011 (Fax)

ATTORNEY FOR APPLICANTS